

# Distributional records and natural history notes on threatened and little known birds of southern Ecuador

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The study of the Ecuadorian avifauna dates back to the mid 19th and early 20th century (e.g. Sclater 1858, 1859, 1860, Berlepsch & Taczanowski 1883, 1884, 1885, Salvadori & Festa 1899 a, b, 1900, Lønnberg & Rendahl 1922). Chapman (1926) presented a thorough synthesis of the material gathered during this epoch. A wave of renewed interest in Ecuadorian birds started in the early 1980s and has resulted in a wealth of information from previously little known areas (e.g. Ridgely 1980, Robbins *et al.* 1987, Ridgely & Robbins 1988, King 1989, Best & Clarke 1991, Bloch *et al.* 1991, Krabbe 1992, Toyne *et al.* 1992, Best *et al.* 1993, Robbins *et al.* 1994). A comprehensive treatment of the birds of Ecuador is also in preparation: Robert S. Ridgely and Paul J. Greenfield, *The Birds of Ecuador*, Vol. I: *Status, Distribution, and Taxonomy*. In this paper we refer to the manuscript of this book as "Ridgely & Greenfield in prep.".

Chapman (1926) was the first to realize that the avifauna of the humid premontane and montane forests of southeastern Ecuador and northeastern Peru is more closely related to that of Colombia and the northern Andes than to that of the Andes south of the Río Marañon in Peru and Bolivia. Today it is widely believed that the southern limit of the north Andean avifauna component is reached north of the Marañon River Valley (Vuilleumier 1969, Parker *et al.* 1985, Fjeldså & Krabbe 1990), which is a deep, arid inter-Andean basin surrounded by relatively low mountains. The Andes north and south of the low are connected to the west, but the mountain passes are as low as 2000 m and the montane forest is now patchy and discontinuous. Therefore the depression is believed to pose a major barrier to the dispersal of humid forest avifaunal elements of the High Andes. In the last decades important contributions to the understanding of the avifauna south of the Río Marañon in Peru were produced by Terborgh & Weske (1975), Parker & O'Neill (1980), Schulenberg & Parker (1981), Parker *et al.* (1982), Schulenberg *et al.* (1984) and Schulenberg (1987). Since the mid 1980s further expeditions have ceased due to the increased activity of the guerrilla group Sendero Luminoso.

The avifauna of the Huancabamba region north of Río Marañon in Peru was surveyed thoroughly from 1974 to 1980 during a series of expeditions from the Louisiana State University Museum of Zoology (LSUMZ) (Parker *et al.* 1985). Here we summarise the most interesting findings from the three expeditions to southern Ecuador by the Zoological Museum, University of Copenhagen (ZMUC): January–July 1989, October 1991–January 1992, and February–July

1992, representing a total of 14 months of fieldwork (1000+ man-days). Most of the fieldwork was conducted in and around Podocarpus National Park, Loja and Zamora-Chinchipe Provinces, to fill out major gaps in knowledge of the avifauna of the Central and Eastern Andes endemic centres (Bibby *et al.* 1992). In January 1992 a few specimens were collected in cooperation with the Academy of Natural Sciences of Philadelphia (ANSP) and Museo Ecuatoriano de Ciencias Naturales, Quito (MECN), where the material is deposited. In the present paper we also include material collected from 14 to 27 July 1992 by A. Sornoza Molina, F. Sornoza Molina and T. J. Davis at Panguri, c. 12 km NE of San Francisco del Vergel ( $4^{\circ}37'S$ ,  $78^{\circ}58'W$ ), Zamora-Chinchipe Province (data contributed by R. S. Ridgely).

Some of our data have already been cited by other workers (e.g. Fjeldså & Krabbe 1990, Collar *et al.* 1992). Recent published data and additional references for most of the species included in this paper can be found in the publications mentioned thus far. We follow the species taxonomy of Sibley & Monroe (1990, 1993), but the species sequence of Meyer de Schauensee (1982). Where abundance is stated, we follow the definitions given in *Birds of Colombia* (Hilty & Brown 1986), treating a field trip as a one-day observation period. Table 1 gives coordinates, province, altitude, habitat and time of survey for localities mentioned more than once in the text (see also Fig. 1).

Information is given for 43 species. This includes information on 3 species new to Ecuador, 7 threatened species, and 8 near-threatened species (status according to Collar *et al.* 1994). Altitudinal range extensions of 36 species are summarised in Table 2, including several species not listed in the species accounts.

### Species accounts

#### GREY TINAMOU *Tinamus tao*

We saw this species on three occasions on 11 April 1992 at Río Bombuscara (1100 m). In the early morning one was observed for 3–4 minutes walking on a trail before disappearing into the forest. The same morning two birds were flushed from the same trail, and late that afternoon another bird was seen briefly. The identification was based on large size (as big as *Tinamus major*), greyish ground-colour on the body and a well-marked dark stripe on a light-speckled head and neck.

The species was also heard at Panguri 21 July 1992 by T. J. Davis (R. S. Ridgely *in litt.*). There are very few recent records of this species from Ecuador (R. S. Ridgely *in litt.*).

#### BLACK-AND-CHESTNUT EAGLE *Oroaetus isidori*

near-threatened

From January to June 1989 single birds were seen on several occasions at Cajanuma between 2600 and 3150 m. An adult was also seen on 15 November 1991 in the Cajanuma valley at 2600–2700 m. One adult and one immature were seen 30 March 1992 at Cajanuma (3000 m). One adult bird was seen soaring on 22 April at a similar altitude at the same locality. The species is rare at Cajanuma. In 1989

Localities surveyed in Ecuador by expeditions from the Zoological Museum, University of Copenhagen. Province abbreviations: L, Loja; Z-C, Zamora-Chinchipe

Locality (Province)	Coordinates	Altitude (m)	Habitat	Year	Survey months (no. of days)
Above Lauro Guerrero (L)	3°57'S, 79°48'W	2200–2600	Disturbed primary cloud forest <sup>a</sup>	1989	Mar (2), May (4), Jun (1)
Acanama (L)	3°41'S, 78°58'W	2900–3460	Pastures and cloud forest fragments <sup>a</sup>	1989	Apr (7), Jun (5)
Rio Bombuscará (Z-C)	4°08'S, 78°58'W	1000–1300	Humid primary forest <sup>a</sup>	1992	May (14), Jun (2)
San Pedro (L)	4°13'S, 79°11'W	1700–2300	Secondary humid forest, pastures with shrubbery <sup>b</sup>	1989	Apr (2), May (4)
Selva Alegre (L)	3°32'S, 79°22'W	2850–3050	Fragmented primary humid forest <sup>a</sup>	1991	Oct (2), Nov (6), Dec (5)
Between Palanda and Valladolid (Z-C)	4°35'S, 79°08'W	1400	Patches of pasture	1992	Mar (3), Apr (3), May (2)
Cajanuma (L)	4°06'S, 79°09'W	2600–3100	Primary and secondary cloud forest, patches of bamboo <sup>a</sup>	1991	Feb (15), Mar (12), Apr (3), May (2), Jun (2)
Catacocha/Celica/Macara road divide (L)	4°08'S, 79°50'W	900–1300	Fields, <i>Acacia</i> -scrub and remnants of <i>Ceiba</i> forest	1992	Feb (2), Mar (21), Apr (21), May (7)
Near Sabanilla (Z-C)	4°00'S, 79°02'W	1500–1700	Disturbed humid primary forest <sup>b</sup>	1989	Mar (3), Jun (1)
Quebrada Avioneta (Z-C)	4°17'S, 78°56'W	1850–2000	Very wet primary forest, small boggy gaps <sup>b</sup>	1991	Dec (1)
Quebrada Honda (Z-C)	4°30'S, 79°07'W	1800–2550	Disturbed humid primary forest <sup>b</sup>	1992	Jan (3)
Panguri (Z-C)	4°37'S, 78°58'W	1575–1900	Humid primary forest	1992	Jul (14)
Sozorange/Nueva Fatima (L)	4°16'S, 79°49'W	1750	Dry secondary forest <sup>a</sup>	1989	Jun (3)
Uritusinga (L)	4°06'S, 79°09'W	2800–3000	Remnants of primary and secondary cloud forest <sup>a</sup>	1989	Feb (1), Mar (3)
West of Pass on Loja-Zamora road (L)	3°58'S, 79°09'W	2500–2700	Remnants of mostly secondary forest <sup>a</sup>	1989	Feb (3), Mar (4)
				1991	Nov (1)

<sup>a</sup>For more detailed habitat description, see Bloch *et al.* 1991.

<sup>b</sup>For more detailed habitat description, see Rahbek *et al.* 1993.



Figure 1. The fifteen localities surveyed in southern Ecuador by expeditions from the Zoological Museum, University of Copenhagen. Dashed lines, provincial borders; dotted lines, border of Podocarpus National Park. For detailed information on localities, see Table 1. 1, above Lauro Guerrero; 2, Acanama; 3, between Palanda and Valladolid; 4, Cajanuma; 5, Catacocha/Celica/Macara road divide; 6, near Sabanilla; 7, Quebrada Avioneta; 8, Quebrada Honda; 9, Panguri; 10, Río Bombuscaro; 11, San Pedro; 12, Selva Alegre; 13, Sozoranga/Nueva Fatima; 14, Uritusinga; 15, west of pass on Loja-Zamora road.

single birds were also observed near the Loja-Zamora road, Zamora-Chinchipe Province on 11 April at 2000 m ( $3^{\circ}58'S$ ,  $79^{\circ}06'W$ ) and on 16 May at 2250 m ( $3^{\circ}58'S$ ,  $79^{\circ}13'W$ ).

The Black-and-chestnut Eagle is rare and local within its whole range (Fjeldså & Krabbe 1990) and probably needs extensive areas of undisturbed montane forest. Podocarpus National Park probably contains one of the largest areas of protected habitat for the species anywhere.

#### BEARDED GUAN *Penelope barbata*

threatened

The first positive identification of the Bearded Guan, at Cajanuma in December 1988 (D. Platt *in litt.* 1989), represented the first record by ornithologists in Ecuador since August 1939 (see account in Collar *et al.* 1992). In 1989 we saw the species regularly at Cajanuma,

Records which (according to Ridgely & Greenfield in prep.) are extensions of Ecuadorian altitudinal ranges (m) of various species. Low indicates an extension down-slope; high an extension up-slope; asterisk an extension of global altitudinal range. Coordinates are only given for localities not included in Table I.

Species	Low		High	
	altitude	locality	altitude	locality
<i>Tinamus tao</i>	1575	Panguri	2800*	Yanganá-pass; 4°28'S, 79°11'W above Lauro Guerrero
<i>Meleagris americana</i>	1000	Río Bombuscará	2500	Quebrada Avioneta
<i>Penelope purpurascens</i>			1900	Catococha/Celica/Nicará road divide
<i>Columba fasciata</i>			1400	Quebrada Honda
<i>Pyrrhura albipectus</i>			2450	Cajanuma
<i>Brotogeris pyrrhopterus</i>	950	Río Bombuscará	2850	above Lauro Guerrero
<i>Pionus sordidus</i>	950	Río Bombuscará	2500	Cajanuma
<i>Amazona mercenaria</i>			2600	Cajanuma
<i>Piaya cayana</i>			2600*	Cajanuma
<i>Steatornis caripensis</i>			3200	Cajanuma
<i>Nyctidromus albicollis</i>			3400*	Cajanuma
<i>Chaetura pelasgica</i>			1400*	south of Valladolid; 04°35'S, 79°08'W
<i>Cypseloides nivalis</i>			2750	Celica-mountains; 04°01'S, 79°52'W
<i>Threnetes leucurus</i>			1900	Quebrada Avioneta
<i>Phaethornis guy</i>			3050*	Cajanuma
<i>Eutoxeres aquila</i>				Volcán Pichinchá; 00°08'S, 78°35'W
<i>Chlorostilbon mellisugus</i>	2500	Cajanuma		south of Valladolid; 04°35'S, 79°08'W
<i>Aglaeactis cupripennis</i>	2200	Loja; 04°01'S, 79°11'W		Panguri
<i>Lafresnaya lafresnayi</i>	2450*	Quebrada Honda		Celica-mountains; 04°01'S, 79°52'W
<i>Enisura ensifera</i>	2150	Quebrada Honda		Panguri
<i>Coeligena lutetiae</i>			1400*	Quebrada Avioneta
<i>Caliphlox amethystina</i>			1800	Panguri
<i>Aulacorhynchus derbianus</i>			2750*	Loja-Zamora road, 03°59'S, 79°02'W
<i>Picumnus lafresnayi</i>			1575	Celica-mountains; 04°01'S, 79°52'W
<i>Sclerurus mexicanus</i>			2000	Jatumpamba; 04°19'S, 79°52'W
<i>Todirostrum cinereum</i>			1850	Celica-mountains; 04°01'S, 79°52'W
<i>Colonia colonus</i>			1575	Quebrada Avioneta
<i>Miyiarchus ferox</i>			1650	Panguri
<i>Phaeoptilus tapera</i>			1200	Loja-Zamora road, 03°59'S, 79°02'W
<i>Notiochelidon fuscipes</i>			2750	Celica-mountains; 04°01'S, 79°52'W
<i>Cathartes fuscater</i>			2600	Jatumpamba; 04°19'S, 79°52'W
<i>Psarocolius angustifrons</i>			2750	Celica-mountains; 04°01'S, 79°52'W
<i>Euphonia xanthogaster</i>			1850*	Quebrada Avioneta
<i>Anisognathus laciniatus</i>			2250*	Jatumpamba; 04°19'S, 79°52'W
<i>Cissopis leveriana</i>				
<i>Volatinia jacarina</i>				

especially below the Cajanuma visitor centre, where the species was fairly common at c. 2550–2700 m. It was also seen, although rarely, above the visitor centre at 2750–3000 m. On visits to Cajanuma in late 1991 the species was remarkably harder to find and was only recorded twice: two different, small groups were heard at dusk on 27 November at 2600 m and a pair was seen at the same place on 10 December. The apparent difference in abundance could be due to variation in food availability in the area. The species was also uncommon at Cajanuma from March to May 1992: two birds were heard on 14 March at 2650 m, two were seen on 6 and 7 April at 2700 m, a single bird was seen on 16 April above the visitor centre at 2875 m, and one was observed on 22 April at 2700 m.

In isolated fragments of cloud forest on the east side of Acanama, Bearded Guans were observed several times in 1989. On 17 June a pair with chicks was seen at 2950 m by P. Mora. Other breeding records of the species are from the months of December–January, March, June and July (various sources; Collar *et al.* 1992). In 1992 at the same locality, the species was fairly common with a total of 23 observations and 36 individuals recorded at 2950 m during May. In 1989 the species was found at 2900–3050 m at Selva Alegre in an approximately 4 km<sup>2</sup> forest patch in Cordillera de Chilla. Here it was common and abundant, with several pairs observed several times each day. In 1991 one bird was seen in the San Pedro area at 2000 m, and on the same date a group of three was seen immediately east of this area at 2350 m.

Outside Ecuador the species only occurs in Peru north of Río Marañon. Recent fieldwork indicates that it occurs in the main chain of the Andes in southernmost Ecuador wherever humid primary forest remains, even in small isolated patches of forest. It has also been observed several times foraging in second growth at edges of primary forest.

Based on surveys in 1989 we roughly estimated the Ecuadorian population of Bearded Guans to be c. 1500 pairs (Bloch *et al.* 1991): 50–100 pairs in Cordillera de Chilla, 400 pairs in the Andes of the southern part of Azuay Province and the northern part of Loja Province, and 1000 pairs in the Andes of southern Loja Province, including Podocarpus National Park. The real figure, however, is probably considerably higher as that estimate did not include areas in Zamora-Chinchipe Province outside the Podocarpus National Park. So far it has also been found in 1992 at Cordillera las Lagunillas where 3 were seen on three occasions at 2250 m (R. S. Ridgely *in litt.*, M. Robbins *in litt.*). The Bearded Guan also seems to occur in a larger area in Azuay than previously thought (Ridgely & Greenfield *in prep.*).

The biology of the species is poorly known. Most of our observations were of pairs, but single birds or groups of 3–4 were also seen. They mostly foraged in the top of the canopy of smaller trees or in the lower branches of larger trees, usually 2–5 m above the ground, but sometimes as high as 10 m. The species was also seen a few times on grassland close to forest edges or on the ground inside the forest, especially near water. If disturbed while in a tree, the bird did not flee immediately, but reacted by moving its head repeatedly backwards and

forwards, clucking loudly for up to a couple of minutes with increased frequency, tone and volume just before taking off. Mostly the birds escaped by flying, but when encountered on the ground, sometimes by running. The birds did not seem shy, although they must be attractive gamebirds for the locals. At least at Acanama, the Saraguro Indians in the area do not shoot them, guns and cartridge probably being too expensive, but they often asked whether mist-nets could be used to catch them.

Although more abundant than previously thought, the species is undoubtedly seriously threatened by habitat destruction, which is severe in southern Ecuador (Bloch *et al.* 1991). At present it may be a minor problem, but the tame nature of the species makes it very vulnerable to hunting. The only protected area in which the species occurs is Podocarpus National Park. Unfortunately, our data suggest that the species primarily occurs on the edge of the national park, and recent surveys suggest that large parts of the population in the area may occur on the slopes below the national park (R. Tapia pers. comm.). Pressure from settlers and small-scale logging around Podocarpus National Park is relatively high and expected to increase in the future. The forest patches in Cordillera de Chilla, where the highest density was found, are few and small, and are likely to disappear in the near future if the current rate of habitat destruction continues.

#### **PLUMBEOUS RAIL *Pardirallus sanguinolentus***

In the early evening of 26 November and 4 December 1991, H. Bloch and R. Tapia observed two birds crossing the main street of Vilcabamba at 1600 m. The site borders a river bed and moist sugarcane fields. Two specimens were collected there on 10 December 1991 by F. Sornoza and R. S. Ridgely (ANSP 184558, MECN 6137). One bird was also seen on 29 December 1991 foraging in a wet pasture bordering a small *Scirpus* marsh on the outskirts of Vilcabamba at 1500 m. These observations are the first definite records for Ecuador. The Plumbeous Rail seems fairly common in the Vilcabamba area and is well known to local people; but suitable habitat is quite limited and the total population is presumably not very large.

The Plumbeous Rail was hitherto known from north of Olmos in Lambayeque in northern Peru (R. S. Ridgely *in litt.*) to southeastern Brazil and Tierra del Fuego (Fjeldså & Krabbe 1990). The Ecuadorian birds belong to the North Peruvian race *simonsi* (Ridgely & Greenfield *in prep.*).

#### **IMPERIAL SNIPE *Gallinago imperialis***

near-threatened

The species was first found in Ecuador on 17 January 1990 at Loma Yanayacu on Volcán Pichincha (Krabbe 1992). We found it at Cajanuma where two to four birds were heard on 14–15 November 1991 at dusk and dawn at 2800–2900 m, close to the Cajanuma visitor centre. On 1 November 1991 one bird was seen walking on a trail through this forest at 2950 m. One bird was observed 2 March 1992 at Cajanuma while foraging in the open during foggy weather and pouring rain from 11.25 to 11.55 a.m.; the only prey item seen taken was a

lumbricid 10 cm long, caught in moss on the ground (see also Poulsen 1993).

The Imperial Snipe has now been found to occur at a number of localities on the east slope of the Andes (Ridgely & Greenfield in prep.), apparently having previously been overlooked due to its retiring habits. Outside Ecuador the species is known from a number of localities in Peru including Cerro Chinguela (Parker *et al.* 1985), and from "Bogotá" trade skins of unknown origin.

## GOLDEN-PLUMED PARAKEET *Leptosittaca branickii*

threatened

In 1989 we saw flocks of 3–20+ individuals several times at Cajanuma from 7 February to 21 March, but not later, although fieldwork continued until late June. At the same locality small flocks were seen on 15 November and 10 December 1991. On 14 December 1991 18 birds landed in the canopy around the visitor centre. All our records from Cajanuma are from 2700 to 2900 m. Golden-plumed Parakeets may not be permanently present in the Cajanuma Valley, but appear to visit the area seasonally, at least from November to March.

At Acanama the species was seen several times on 16–22 March and 15–19 June 1989 and once on 15 May 1992 at 2950–3000 m. In 1989 it was also observed four times on 22 May south of Yangana, Loja Province ( $4^{\circ}28'S$ ,  $79^{\circ}11'W$ ), during a few hours spent here. This is in the period when it seems to be absent in the Cajanuma area to the north.

Especially at Acanama these parakeets were often seen crossing areas to feed in isolated groups of trees. Contrary to Gretton (1986), we did not find them to be associated with *Podocarpus* spp., which were not present at any of the localities where we saw Golden-plumed Parakeets.

## WHITE-NECKED PARAKEET *Pyrrhura albipectus*

threatened

This species is an Ecuadorian endemic originally described from Zamora (Chapman 1914) and found only at various localities in the Zamora-Chinchipe Province and in Cordillera de Cutucú in Morona-Santiago Province (Ridgely & Greenfield in prep.). The status of the White-necked Parakeet was recently reviewed by Toyne *et al.* (1992).

Flocks of 4–15 individuals (daily totals of 10–50) were seen every day from 1 to 4 May 1989 flying upstream in the Río Bombuscará valley passing the visitor centre (1000 m). In 1991 small flocks were seen or heard almost daily 30 October–1 November, 20–23 November and 5–9 December around the Río Bombuscará visitor centre. On 22 November 1991 at Río Bombuscará, White-necked Parakeets were seen flying to moss-covered rocks adjacent to a small waterfall, climbing up and down the rocks, in the latter case often with the head down. They used wings, bill and feet to hold on to the moss and to keep balance. They poked into the wet moss with their bills, presumably drinking, then shook their heads vigorously. Sometimes they crawled out into the slower-flowing parts of the stream to drink. Later the totally wet parakeets perched on horizontal branches in front of the waterfall and autopreened or shook themselves. On 26 March and 10 April 1992

small flocks passed the Río Bombuscará visitor centre. White-necked Parakeets appear to be common in the area.

Four birds landed in trees on 1 December 1991 in Quebrada Avioneta at 1900 m. Another flock of four individuals was seen on 7 January 1992 between Romerillos and Quebrada Avioneta at 1600 m. Several small flocks were seen on 1–2 January 1992 near Sabanilla at 1500–1700 m, where two were collected (ANSP 184564, MECN).

Six specimens (ANSP 185126-9, MECN 6138, 6300) were also collected at Panguri on 14–27 July 1992, extending the species' range to close to the Peruvian border. The White-necked Parakeet has also been found close to the Peruvian border in Cordillera del Condor (Krabbe & Sornoza 1994); its days as an apparent Ecuadorian endemic are probably numbered.

#### **BARRED PARAKEET *Bolborhynchus lineola***

The Barred Parakeet was first found in Ecuador as recently as 1979 (Ridgely 1980). The records presented here are the first from the southern part of the country, where its occurrence is not surprising, as it is known from central Peru (Meyer de Schauensee 1966, 1982) and birds tentatively referred to this species have also been recorded at Cerro Chinguela in northern Peru (Parker *et al.* 1985).

In 1989 the species was not recorded at Cajanuma in the period 3 February–12 April, but on all later visits (13–14 May, 6 and 24 June) Barred Parakeets were numerous at altitudes between 2500 and 2900 m. The only observation in 1992 was a twittering flock of 35 individuals crossing over Cajanuma late in the afternoon on 1 May, leaving the park heading northwest. The only record outside Cajanuma was a flock of seven seen on 14 March 1989 at Uritusinga (2900 m).

#### **RED-FACED PARROT *Hapalopsittaca pyrrhops*** threatened

This scarce species has been recorded from Cañar Province (Ridgely & Greenfield in prep.) south to Cerro Chinguela in northern Peru (Parker *et al.* 1985).

One pair was observed on 22 February and 2–3 birds on 10 March 1989 at Cajanuma (2700–2800 m). An adult pair with two juveniles was seen perched on 1 and 6 April 1992 at Cajanuma (2700 m). The only other information on the Red-faced Parrot's breeding season is the suspected breeding at Río Mazan during August–September (King 1989).

Whereas the species is rare at Cajanuma, it was fairly common and relatively numerous at Selva Alegre (2850–3000 m), Cordillera de Chilla, on 9–11 May 1989. Small groups were frequently seen flying 30–50 m above the 4 km<sup>2</sup> forest fragment. These groups were also observed in 20–22 m tall forest, foraging actively but secretly inside the canopy at heights between 4 and 20 m, apparently eating buds. The species has been reported to be associated with *Podocarpus* trees (J. R. King, in Collar *et al.* 1992). Although a common tree in the area, *Podocarpus* was seemingly not used for food. The largest flock was observed on 10–11 May 1989 and comprised 16 roosting individuals. Cordillera de Chilla may be a world stronghold for this species (see also

under Bearded Guan). Sadly, no part of this mountain range is protected, and the surveyed locality and other similar small forest patches in the area are disappearing at an alarming rate.

**BUFF-FRONTED OWL** *Aegolius harrisii*

near-threatened

This widely distributed species (from Venezuela to Paraguay) seems to be everywhere rare. Thus only four Ecuadorian records (including the one below) exist (Ridgely & Greenfield in prep.). In Peru it has been found as near Ecuador as Cerro Chinguela and Cruz Blanca (Parker *et al.* 1985) and it is perhaps overlooked and more common than the few records indicate.

Our sole record was one bird mist-netted, ringed and photographed on the night of 15–16 November 1991 at 2600 m along the road leading to the visitor centre at Cajanuma. The bird was caught in an area of second growth next to primary forest.

**OILBIRD** *Steatornis caripensis*

We saw 1–2 birds flying around just after sunset in the Cajanuma Valley at 2600 m on 3 days in November 1991. At one occasion a bird was seen landing repeatedly in a fruiting tree. Here the bird climbed around, apparently searching for food. A breeding cave is said to exist within Podocarpus National Park near the upper parts of Río Sabanilla (P. Mora pers. comm.).

**BROWN VIOLET-EAR** *Colibri delphinae*

A bird was seen at 1400 m between Valladolid and Palanda, Zamora-Chinchipe Province, on 21 May 1989. There are only three other records of this widespread species (Central America to Bolivia) from southern Ecuador (R. S. Ridgely *in litt.*), but many records from eastern Peru (M. Robbins *in litt.*).

**FAWN-BREASTED BRILLIANT** *Heliodoxa rubinoides*

A bird was mist-netted and collected at 1900 m on 5 January 1992 (ANSP 184593) at Quebrada Avioneta. This is one of very few records in southern Ecuador, others being one from Río Upano Valley in Morona-Santiago Province and one from the Río Isimanchi Valley in Zamora-Chinchipe Province (R.S. Ridgely *in litt.*). The species is also known from Cerro Chinguela in northeastern Peru (Parker *et al.* 1985).

**PURPLE-BACKED THORNBILL** *Ramphomicron microrhynchum*

This species seems much rarer in southern than in northern Ecuador. Despite several hundred person-days in seemingly appropriate habitats, the Purple-backed Thornbill was only seen twice: a male on 9 February 1989 at Cajanuma (3000 m) and another male on 27 February 1989 at Uritusinga (2750 m).

**NEBLINA METALTAIL** *Metallura odomaiae*

near-threatened

We found the Neblina Metaltail to be common (more than 10 sightings 31 October–1 November) and the most abundant hummingbird at 3200–3300 m around Lagunas del Compadre southeast of Cajanuma, Zamora-Chinchipe Province (4°11'S, 79°08'W).

This species was described as recently as 1980 (Graves 1980) and is endemic to a small area in the Andes on the border between Ecuador and Peru. In Ecuador it was first recorded in 1989 at Cajanuma (M. Kessler *in litt.*), which is still the northernmost locality known for the species. At Cajanuma the Neblina Metaltail is sympatric with both the Tyrian Metaltail *M. tyrianthina* and its near relative the Viridian Metaltail *M. williami*, though probably occurring mainly above the range of Viridian Metaltail. The Neblina Metaltail was also found at Río Angashcola in Loja Province in 1991 (R. Williams & J. Tobias *in litt.*), and was the most abundant hummingbird above 3200 m at Cordillera las Lagunillas in Zamora-Chinchipe in 1992 (M. Robbins *in litt.*, Ridgely & Greenfield *in prep.*).

**COPPERY-CHESTED JACAMAR** *Galbulia pastazae*

threatened

This species has been found at one locality in extreme southern Colombia and 12 sites along the eastern Andes slope of Ecuador (Poulsen & Wege 1994).

In 1989 it was fairly common in the Río Bombuscará area at 1000–1300 m. This area, and presumably others within Podocarpus National Park, seems to hold good populations of Coppery-chested Jacamars, though a "false impression of abundance may be caused by the presence of resident birds along well watched trails" (Poulsen & Wege 1994). The species was categorized as "insufficiently known" and regarded as possibly threatened by habitat destruction by Collar *et al.* (1992). Visits to the Bombuscará area from late October to early December 1991 were within the breeding season of the species. Stationary pairs—as opposed to the single individuals seen in April–May 1989—were seen daily. The area along the estimated 2–3 km main trail at 950–1300 m contained four to six pairs. Two nest holes were found in an earth bank created by the construction of a trail, in one of which adults were seen feeding nestlings 5–9 December. The entrance to the nest was approximately 1.5 m above the ground. The burrow was at least 0.5 m long and curved upwards, making the nestlings impossible to see.

**BLACK-BILLED MOUNTAIN-TOUCAN** *Andigena nigrirostris* near-threatened

The Black-billed Mountain-Toucan is found from Venezuela to Ecuador (Fjeldså & Krabbe 1990). In Ecuador it is most numerous in the north (R. S. Ridgely *in litt.*).

Single birds were seen on 1 and 2 December 1991 in Quebrada Avioneta at 1950–2000 m. These records represent a southward extension of the known range of the species, which was previously known no farther south than the Gualaceo-Límon road in Morona-Santiago Province (Ridgely & Greenfield *in prep.*).

**RUFOUS-NECKED FOLIAGE-GLEANER** *Automolus ruficollis*

threatened

The status of this species, endemic to the Tumbesian region, was recently reviewed by Best *et al.* (1993). We saw one bird on 17 December 1991 following a mixed flock through a hedgerow at San Pedro (2200 m) at the eastern edge of the species' range, very near

to the border of Podocarpus National Park, from where the species has never been recorded.

#### **SHARP-TAILED STREAMCREEPER** *Lochmias nematura*

On 31 October 1991 an individual was seen escaping from a mist-net situated next to a deep, narrow ravine near the Río Bombuscará visitor centre (1000 m). One bird was also seen at close range on 11 April 1992 foraging on moss-covered boulders along the Río Bombuscará (950 m). There are extremely few records of this species in the northern (Andean) part of its range, where it must be considered rare and local, though recent work (ANSP) in the Zumba area seems to indicate that it may be more numerous there than elsewhere in its limited Ecuadorian range (Ridgely & Greenfield in prep., R. S. Ridgely *in litt.*).

#### **CHAPMAN'S ANTSHRIKE** *Thamnophilus zarumae*

We recorded this species several times near San Pedro on 16–18 December 1991 at 1600–2300 m. This represents a considerable eastward extension of the known range of this restricted-range species. Other species belonging to the Tumbesian Endemic Centre (Cracraft 1985) or Ecuadorian Dry Forest Endemic Bird Area (Bibby *et al.* 1992), such as Rufous-necked Foliage-gleaner *Automolus ruficollis*, Three-banded Warbler *Basileuterus trifasciatus*, Black-cowled Saltator *Saltator nigriceps* and Bay-crowned Brush-Finch *Atlapetes sebohmi*, also approach the continental divide in this area (our observations).

#### **RUSSET ANTSHRIKE** *Thamnistes anabatinus*

Two subspecies of Russet Antshrike have been recorded in Ecuador. *T. a. intermedius* occurs in the west south to western Loja, *T. a. aequatorialis* in the east south to at least Morona-Santiago (Ridgely & Greenfield in prep.). A male (ANSP 185466) obtained on 25 July 1992 at Panguri (1650 m), southern Zamora-Chinchipe, approaches in some characters the Peruvian subspecies *rufescens* (being more ochraceous below, lacking rufescent tone on crown, etc.) (Ridgely & Greenfield in prep.). In Zamora-Chinchipe Province the species has also been recorded at Río Bombuscará; a bird mist-netted and photographed (but not collected) here on 4 May 1989 showed characters similar to the Panguri Specimen.

#### **OCHRE-BREASTED ANTPITTA** *Grallaricula flavirostris*

Of this species, until now unrecorded on the east slope in Ecuador south of northwestern Pastaza (Ridgely & Greenfield in prep.), ANSP collected three specimens at 1575–1650 m in the Panguri area 14–27 July 1992 (ANSP 185496–7, MECN 6387). A bird was also seen by P. Toyne (*in litt.*) at 950 m in the Río Bombuscará area on 22 August 1990.

#### **PERUVIAN ANTPITTA** *Grallaricula peruviana*

near-threatened

This little known species is endemic to a narrow elevational zone in a small area of northern Peru and southern Ecuador. It was first found in Ecuador in 1984 in Cordillera de Cutucú, Morona-Santiago Province,

by N. Krabbe (Fjeldså & Krabbe 1986), and seen again on 21 March 1990 along the Gualaceo-Limon road, also in Morona-Santiago Province, by B. Whitney (Ridgely & Greenfield in prep.). We mist-netted a male and a female on 5 January 1992 at Quebrada Avioneta, 1950 m (both collected, MECN 6293 and ANSP 184702 respectively).

**COTINGA sp. *Doliornis* sp.**

On 7 March 1989 two individuals of a *Doliornis* cotinga were seen at 3100 m at Cajanuma by H. Bloch and M. K. Poulsen. Observation conditions were ideal, sunny with light winds. The birds were observed at a distance of 20 m for 5–7 minutes. They were perching and foraging on the tops of 1–3 m high bushes in the transition zone between stunted treeline forest and heather paramo. One of the birds was described in the field notes as follows: cap and area between eyes and bill black, eyes grey. Upperparts dark grey, with even darker wings and tail. Throat greyish, vent and lower belly rusty and rest of underparts brownish. The other individual was generally lighter coloured, without black cap and less rich in contrasts. Upperparts brownish grey. Throat and chest greyish, rest of underparts pale rufous. The first bird was probably a male, the other a female (Fjeldså & Krabbe 1990 erroneously interpreted the second morphotype as being a juvenile; but see Robbins *et al.* 1994). Due to the rufous lower belly and the site of observation (north of the Marañon depression and 500 km north of the known range of the Bay-vented Cotinga *Doliornis sclateri* in Huánuco and Junín, Peru), the possibility that these birds represented a new subspecies of *D. sclateri* or perhaps a new species was considered by the observers (see Fjeldså & Krabbe 1990, p. 447). However, without any specimen, it was decided to refer the observations to the similar Bay-vented Cotinga (Bloch *et al.* 1991). On 24 October 1991 a glimpse of an adult was caught by H. Bloch, M. K. Poulsen and F. Brammer at approximately the same spot as the observation in 1989. In the same area, a single bird was observed on 17 November 1991 by A. Long (pers. comm.). He described the entire underparts as rufous. On 7 April 1992, at 2875 m, a *Doliornis* was seen by B. O. Poulsen very close to the site of the two previous observations. The description of this bird is the same as the presumed male from 1989.

In August 1989 a cotinga referred to as *Doliornis sclateri* (Renjifo 1994) was seen on the west slope of Cordillera Central in the Andes of Colombia (*c.* 4°37'N, 75°28'W), more than 1000 km north of Cajanuma. Renjifo described the underparts as chestnut (undertail coverts and belly to the lower breast). Also the rump was brown, a character not seen in the above observations nor described for any specimens (Robbins *et al.* 1994).

In March 1992 ANSP collected four *Doliornis* specimens on Cerro Mongus, Carchi Province, northern Ecuador, two at the same locality in June 1992, and one of a pair near the Ecuador/Peru border in October 1992 (Robbins *et al.* 1994). These birds all differ from the above descriptions by having rufous underparts that extend from the middle of the breast (not lower belly, lower breast or entire underparts)

through the crissum, and a grey rump (not brown as in Colombia). These specimens have been described as a new species, Chestnut-bellied Cotinga *Doliornis remseni* (Robbins *et al.* 1994).

In conclusion, observations of *Doliornis* cotingas in southern Ecuador and Colombia differ from the specimens collected. This may be due to inappropriate descriptions and observations in the field, polymorphic variation within *Doliornis sclateri*, or an as yet undiscovered age-dependent change in the phenotype. Nevertheless, for lack of specimens from Cajanuma and Colombia any interpretation will be open to dispute.

#### **YELLOW-THROATED SPADEBILL *Platyrinchus flavigularis***

Four specimens (ANSP 185575-7, MECN 6377) were collected at Panguri 14-27 July 1992, at 1575-1600 m. Previously, the Yellow-throated Spadebill had been recorded from only three or four localities in Ecuador: Volcán Sumaco and Río Guataracu, both in western Napo Province; Cordillera de Cutucú in Morona-Santiago (Robbins *et al.* 1987); and Ramos Urcu (Meise 1954), which cannot be located with certainty but possibly is identical to Volcán Sumaco (Paynter 1993).

#### **JELSKI'S CHAT-TYRANT *Silvicultrix jelskii***

Single individuals were seen on 16 November and 10 December 1991 in the Cajanuma valley at 2600 m. A specimen labelled "Cajanuma Divide" (taken by D. Norton in October 1965) in the collection of the Harvard Museum of Comparative Zoology (Ridgely & Greenfield in prep.) is the only other record from the area. Jelski's Chat-Tyrant is one of few taxa of decidedly western origin occurring in the Cajanuma area. Since it has only been recorded at Cajanuma in October-December, it may be a dry season visitor there. All three Ecuadorian *Silvicultrix* species co-exist at Cajanuma. However, the Crowned Chat-Tyrant *S. frontalis*, which is basically an east slope species in southern Ecuador, and Jelski's Chat-Tyrant may be altitudinally segregated, as the former has only been recorded at altitudes of 2800-3050 m at Cajanuma.

#### **ORANGE-BANDED FLYCATCHER *Myiophobus lintoni* near-threatened**

This species has a restricted range, occurring from Azuay Province south to Peru north of the Marañon (Fjeldså & Krabbe 1990).

In 1989, groups of 2-5 birds were recorded several times in mixed-species and monospecific flocks at Cajanuma between 2700 m and 3100 m. On 10 December 1991, above the Cajanuma visitor centre, 2-3 birds participated in a mixed-species flock at 3100 m. During a 2½ month study in 1992, the species was recorded on 17 occasions with altogether 80-93 individuals. Towards the end of March, adults were seen feeding juveniles.

The species appears to be commoner in Quebrada Honda. In the periods 11-13 and 28-31 December 1991 Orange-banded Flycatchers were seen every day between 2400 and 2700 m. Up to 10 birds were seen in the same mixed-species flock. On 29 December 1991 an immature male was collected there (MECN 6089).

**LONG-TAILED TYRANT** *Colonia colonus*

This species is represented in western Ecuador by ssp. *leuconotus* and in the east by ssp. *fuscicapillus*. Three specimens taken at Panguri (ANSP 185612-3, MECN 6364) at 1575 m were identified as *C. c. niveiceps*, hitherto known from Bolivia to San Martín in Peru (Traylor 1979).

**PALE-FOOTED SWALLOW** *Notiochelidon flavipes*

This species is known from scattered localities from Mérida in Venezuela to central Bolivia (Fjeldså & Krabbe 1990).

The Pale-footed Swallow appears to be fairly common at Cajanuma, especially at the forest-paramo ecotone. Several birds were seen on 10 December 1991, one on 1 April 1992, and five on 3 May 1992; the records span an altitudinal range of 2675–3300 m. On 31 December 1991 a bird was mist-netted at Quebrada Honda at 2500 m; it was collected and is deposited at ANSP (184820). This is only the fifth Ecuadorian specimen, the first four having been taken at Cerro Pan de Azucar, Napo Province, between 29 September and 11 October 1989 (Marín *et al.* 1992). Notably the species was neither seen nor heard in Quebrada Honda, nor have other workers recorded the species there. The Pale-footed Swallow is easily overlooked or its abundance underestimated, especially when one is unfamiliar with its voice, but as the altitude is also very low for the species, it is perhaps more likely that the bird was an occasional wanderer.

**SLATY-BACKED NIGHTINGALE-THRUSH** *Catharus fuscater*

A bird mist-netted on 29 November 1991 at Quebrada Avioneta (1900 m) is the first definite record from southern Ecuador (see Ridgely & Tudor 1989), though its occurrence is not surprising as it is known from Cerro Chinguela in northern Peru (Parker *et al.* 1985). It was found to be uncommon at 2250 m in 1992 in Cordillera las Lagunillas (M. Robbins *in litt.*, R. S. Ridgely *in litt.*). There are very few records from eastern Ecuador (Ridgely & Greenfield *in prep.*). However, the distribution of these records suggests that the species may occur on the entire east Andean slope, although much less abundantly than on the western slope.

**SPOTTED NIGHTINGALE-THRUSH** *Catharus dryas*

This species appear to be much rarer and perhaps more local in southern Ecuador than further north, as a specimen (ANSP 185733) from Panguri (1575 m) 14–27 August 1992 is the only record from Zamora-Chinchipe Province.

**ANDEAN SLATY THRUSH** *Turdus nigriceps*

Until 1989 there were no 20th century records of this species from Ecuador. Since then, however, it has been found breeding at several localities in southern Loja Province during the months January–April; but a search in August 1989 (ANSP) failed to locate the species there (Ridgely & Greenfield *in prep.*). In Peru there is a small breeding population found locally in the adjacent northwest, where, as in

Ecuador, it may only be present during the first part of the year (Schulenberg 1987). In addition there are several records from the east slope in Peru that most probably represent austral migrants (Schulenberg 1987).

The first record from the east slope in Ecuador is an immature female from Panguri (1575 m) collected on 17 July 1992 (ANSP 185744). This was probably a migrant, either austral or of trans-Andean origin, as has been suggested (Ridgely & Greenfield, in prep.) in the parallel case of the Black-and-white Tanager *Conothraupis speculigera*.

#### SILVER-BACKED TANAGER *Tangara viridicollis*

One seen on 21 May 1989 between Valladolid and Palanda at 1400 m is the first record on the east slope in Ecuador. The occurrence there was to be expected, as it was recorded by Parker *et al.* (1985) in northern Peru at Cerro Chinguela, also on the east slope. A second east slope record was obtained when a male (ANSP 185894) was collected at Panguri (1575 m) on 25 July 1992. The Silver-backed Tanager here occurred in sympatry with the following species.

#### STRAW-BACKED TANAGER *Tangara argyrophenges*

A male (ANSP 185893) was collected on 22 July 1992 at Panguri (1600 m). Other birds were seen there in the following days by F. Sornoza and T. J. Davis, but no more specimens could be obtained (Ridgely & Greenfield in prep.). The Straw-backed Tanager has a patchy distribution ranging from northeast Peru to western Bolivia (Ridgely & Tudor 1989).

#### MASKED MOUNTAIN-TANAGER *Buthraupis wetmorei* threatened

This rare species is only known from a few treeline localities in Ecuador (Fjeldså & Krabbe 1990), one in Colombia (Hilty & Brown 1986) and Cerro Chinguela in northern Peru (Parker *et al.* 1985).

We recorded Masked Mountain-Tanagers only at Cajanuma. In 1989 they were seen on five occasions, at 2950–3400 m, and seemed to be rare. A pair was seen on 5 February, one each on 5 and 20 March, two on 6 June, and one on 24 June. In contrast to the first observation, the last four were of birds participating in mixed-species flocks. The bird on 5 March was seen in scattered bushes in the paramo, whereas the other observations were of birds penetrating elfin forest. The species is secretive, moving and foraging silently and slowly through dense vegetation, which may lead to an underestimation of its abundance. Thus, during a visit on 29 October 1991 to the optimal habitat of the species, 4–5 individuals were seen at 3000–3400 m along a 2 km trail covering a gradual transition between stunted treeline forest and heather paramo with dense brush. However, in spite of numerous visits to the right habitat in 1992 from March to May, it was not recorded. Possibly it makes seasonal movements in response to variation in availability of food resources.

#### YELLOW-WHISKERED BUSH-TANAGER *Chlorospingus parvirostris*

There has been some confusion about the status of the Yellow-whiskered Bush-Tanager in Ecuador. Statements such as "Not

recorded in Ecuador, where it probably occurs" (Paynter & Storer 1970) can be found; and there are still few confirmed Ecuadorian records of this species (Ridgely & Greenfield in prep.). It has recently been found to be "not uncommon" at 2250 at Cordillera las Lagunillas (M. Robbins *in litt.*).

In our surveys, Yellow-whiskered Bush-Tanagers were mist-netted and regularly seen at Río Bombuscará, at Quebrada Avioneta, and near Sabanilla during the period November 1991 to January 1992; they are fairly common or common at all three localities. One specimen was collected at Quebrada Avioneta on 6 January 1992 (ANSP 184884).

#### **BLACK-HEADED HEMISPINGUS** *Hemispingus verticalis*

This usually scarce species was numerous at Cajanuma (February–June 1989 and February–May 1992) and at Acanama (April and June 1989 and May–June 1992), 4–6 individuals being recorded in most mixed flocks. It seems, however, to be less abundant at Cajanuma during the dry season as many fewer were seen in October–December 1991.

The Black-headed Hemispingus seems to be more abundant in the southern part of its range than elsewhere. In Colombia it is regarded as "uncommon and local" (Hilty & Brown 1986) and Robbins *et al.* (1994) found it to be "rare" at Cerro Mongus in Carchi Province in northern Ecuador, while Parker *et al.* (1985) termed it "common" in northern Peru at Cerro Chinguela at the extreme southern edge of the species' distribution. This general trend is also supported by the fact that "the species was certainly more common at Cordillera Cordoncillo (Zamora-Chinchipe) and Cordillera las Lagunillas (Zamora-Chinchipe) than at our Cerro Mongus camp" (M. Robbins *in litt.*).

#### **MASKED SALTATOR** *Saltator cinctus*

near-threatened

One bird was seen and photographed on 21 May 1989 at 2000 m south of the pass on the Yangana-Valladolid road, Zamora-Chinchipe Province ( $4^{\circ}31'S$ ,  $79^{\circ}09'W$ ), in roadside shrubbery bordering patches of primary forest. The species is often regarded as a bamboo specialist (e.g. Fjeldså & Krabbe 1990), but there did not seem to be much bamboo in the area. One bird was also seen following a mixed flock at Quebrada Honda on 12 December 1991 at 2300 m.

This little known species, which until 1989 was known in Ecuador only from Cordillera de Cutucú in Morona-Santiago Province (Robbins *et al.* 1987), has recently been found at five localities in the provinces of Napo, Morona-Santiago, Zamora-Chinchipe and Loja (Ridgely & Greenfield in prep.). It is also known from northern Peru (Parker *et al.* 1985) and Colombia (Renjifo 1991) and thus seems considerably more widespread than was previously thought.

#### **PARAMO SEEDEATER** *Catamenia homochroa*

The species was recorded by mist-netting and observations from Cajanuma in 1991 and 1992 at 2650 m, Uritusinga in 1989 at 2900 m, and west of the pass on the Loja-Zamora road in 1989 at 2900 m. It is rare at all three localities.

These records are the first published from Loja Province, though it was sighted by R. S. Ridgely along the Loja-Zamora road in June 1978 and there is now also a specimen (ANSP 184909) from Cordillera Cordoncillo collected on 30 March 1992 (R. S. Ridgely *in litt.*).

### OLIVE FINCH *Lysurus castaneiceps*

Single birds were seen on two different occasions on 1 November 1991 at Río Bombuscara (1150 m). Two individuals were seen on 12 April 1992 on a rock next to the Bombuscara river (950 m). Their ages could not be determined because of dim light, but one fed the other, the latter begging with shivering wings. On 11 May 1992 one or two birds were foraging at the same site at Río Bombuscara on moss-covered boulders along the river. A closed nest, situated c. 2 metres above the river in dense vegetation overhanging rocks, was visited regularly by the bird(s) from 5 to 6.30 p.m. Whenever an adult arrived at the nest with insects in the bill, faint chirping from nestlings could be heard through the noise of the roaring river. The only nest of the Olive Finch previously described was also situated just above a stream (Schulenberg & Gill 1987). Considering the time between the observations in April and May, it is likely that the observation in April was courtship-feeding of the female.

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## Recent observations and notes on the ecology of the Royal Sunangel *Heliangelus regalis*

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Between July and September 1994, a team comprising five British and Peruvian ornithologists carried out surveys on the Cordillera de Colán, a semi-isolated mountain range in Amazonas department, northern Peru. The fieldwork was conducted as part of a conservation project organised from the University of Cambridge in the U.K. and the Asociación Peruana para la Conservación de la Naturaleza (APECO) in Peru. The aims of this project were to assess the habitat requirements and conservation status of the threatened, restricted-range and poorly known birds of the remaining elfin and cloud forest. The surveys were conducted at 1500–2650 m at two locations in the southern part of the range. A number of bird species of conservation interest were recorded, including the Royal Sunangel *Heliangelus regalis*, a hummingbird threatened with global extinction.

### Status

This species was discovered in 1975 by Fitzpatrick *et al.* (1979) at 1800–2200 m above San José Loudres on the Cordillera del Condor, northern Cajamarca (*c.* 5°02'S, 78°51'W). Two males were subsequently collected by Davis (1986) at 1450 m north-east of Jirillo, San Martín (*c.* 6°03'S, 76°44'W). Habitat destruction and fragmentation within the Royal Sunangel's restricted range have led to it being listed as Vulnerable in Collar *et al.* (1994).

### Expedition records

Between 16 and 31 August 1994 we made 45 observations of males and 44 of females in two areas north of the village of San Cristobal (5°50'S, 78°13'W): one on a ridgeline at 1950 m, the other at 1750 m. Most males (60%) were observed on the ridgeline and a maximum of three were seen together at any one time. In contrast, the majority of females (95.5%) were observed at the lower area. Two of the records of males were presumed to be immatures. The plumage of these individuals was flecked with grey, as described for subadults by Davis (1986), and the tail appeared shorter than that of other males.